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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,579	07/15/2003	Phillip James Bradbury	861975/0270	8858

7590 12/03/2004

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EXAMINER

EDGAR, RICHARD A

ART UNIT	PAPER NUMBER
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3745

DATE MAILED: 12/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/620,579	Applicant(s) BRADBURY ET AL.	
	Examiner Richard Edgar	Art Unit 3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on an RCE filed 01 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/1/04</u> . | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

Applicant's arguments filed 01 November 2004 have been fully considered but they are not persuasive.

Applicant first argues that the term "impeller", as used in the claims, has a narrower meaning than that afforded by the examiner. More specifically, applicant asserts that the term "impeller" is distinguishable from a propeller. The examiner has not found any language in any of the claims which distinguish the invention from a propeller. The claims broadly require "[a] blade for an impeller of an axial fan...". Applicants' evidence submitted with an impeller definition supports the examiner's position. The rotating member of a turbine is, for a turbo-prop engine, the propeller blade. Further, it is submitted that in operation, a propeller blade creates a pressure differential, similar to a cooling fan. The examiner, therefore, maintains that a propeller blade is a blade for an impeller of an axial fan.

Additionally, the examiner reminds applicants that claims must be "given their broadest reasonable interpretation consistent with the specification" *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed Cir. 2000), and that reading limitations of the specification into the claims is impermissible in the examination procedure. The applicants seem to be including limitations from the specification into the claims as a basis for their arguments.

Furthermore, since the preamble, "for an impeller of an axial fan" is merely an intended use statement and does not state a distinct definition of any of the claimed invention's limitations, it is of no significance (see MPEP § 2111.02).

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Regarding the design choice rejections, applicant's have failed to disclose an advantage, purpose or solution to a problem. *Clapp*, 227 USPQ at 973.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 and 2 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 1, respectively, of U.S. Patent No. 6,129,528. Although the conflicting claims are not identical, they are not patentably distinct from each other because the application claims are merely broader than the patented claims. Accordingly, application claims 1 and 2 are not patentably distinct from patent claim 1.

Here, patent claim 1 requires everything in application claims 1 and 2, together with the 19-20% and 45-46% range in chord locations, which define the maximum thickness and the maximum camber, respectively. Thus it is apparent that the more specific patent claim 1 encompasses application claims 1 and 2. Following the rationale

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in *In re Goodman* cited in the preceding paragraph, where applicant has once been granted a patent containing a claim for the specific or narrower invention, applicant may not then obtain a second patent with a claim for the generic or broader invention without first submitting an appropriate terminal disclaimer. Note that since application claims 1 and 2 are anticipated by patent claim 1 and since anticipation is the epitome of obviousness, then application claims 1 and 2 are obvious over patent claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-4, 7 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent No. 4,834,617 issued to Wainauski et al.

Wainauski et al. teach a blade having a root portion, a tip portion, a leading edge, a trailing edge, a cross-sectional shape, taken anywhere along a radius of the blade, characterized by a maximum thickness located substantially constantly as a percentage of chord, and a maximum camber located substantially constantly as percentage of chord (see col. 7, lines 27-33 and Figs. 2 and 3).

The leading and trailing edges are convexly shaped from the root portion to the tip portion.

Furthermore, the leading edge is similar to a parabola in shape, the suction side of the blade is convexly shaped, and the pressure side of the blade is convexly shaped

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towards the leading edge and concavely shaped towards the trailing edge (see Figs. 1 and 4).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 4,834,617 issued to Wainauski et al.

Wainauski et al. disclose the maximum blade thickness at approximately 36% chord and the maximum blade camber at approximately 74% chord.

Wainauski et al. do not disclose expressly a maximum thickness located between about 16% chord to about 23% chord and a maximum camber located substantially between about 40% chord to about 51% chord.

At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to change the chord position range having the maximum thickness and camber because Applicants have not disclosed that 16-23% and 40-51% chord ranges provide an advantage, are used for a particular purpose, or solve a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with a maximum blade thickness at approximately 36% chord and a maximum camber at approximately 74% chord because the Wainauski et al. airfoil dimensions are for a high efficiency blade.

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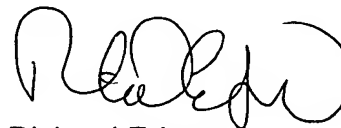
Therefore, it would have been an obvious matter of design choice to modify the substantially constant maximum camber and thickness positions of Wainauski et al. to obtain the invention as specified in claims 2, 5 and 6.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Edgar whose telephone number is (571) 272-4816. The examiner can normally be reached on Monday thru Friday, 8:00 am until 4:00 pm EST.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Richard Edgar
Examiner
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RE



F. DANIEL LOPEZ
PRIMARY EXAMINER